

AMENDMENT AND  
PETITION FOR EXTENSION OF TIME

US SERIAL NO. 09/730,100  
CASE 6121

providing a flue gas at a selected temperature and having a quantity of elemental mercury;

treating the flue gas to convert the elemental mercury to oxidized mercury with at least one selected from the group consisting of: chlorine and aqueous chlorine species; and

removing the oxidized mercury from the flue gas subsequent to and separately from the chlorine treatment step by treating the flue gas with at one selected from the group consisting of: hydrogen sulfide and an aqueous sulfide species.

3. (amended) A method according to claim 1, wherein the removing the oxidized mercury includes the use of a scrubbing liquor containing an alkali reagent.

5. (amended) A method according to claim 3, wherein the aqueous chlorine species comprises an oxi-acid.

6. (amended) A method according to claim 3, wherein the selected temperature of the flue gas is between 125°C and 200°C.

8. (amended) A method according to claim 5, wherein the oxi-acid is at least one selected from the group consisting of:  $\text{Cl}_2\text{O}$ ,  $\text{ClO}_2$ ,  $\text{ClO}_4$ ,  $\text{ClO}$ ,  $\text{HClO}$ ,  $\text{HClO}_2$ ,  $\text{HClO}_3$ , and  $\text{HClO}_4$ .

14. (amended) A method according to claim 3, wherein substantially all of the elemental mercury is converted to oxidized mercury.

18. (amended) A method according to claim 5, wherein the aqueous chlorine species comprises a salt of an oxi-acid.

REMARKS

The Examiner's Office Action mailed July 17, 2002, has been carefully reviewed. Reconsideration of this application, in view of the above amendment and the following remarks, is respectfully requested.